

REMARKS

I. STATUS OF THE CLAIMS

Claims 32-36 and 38-69 are pending. Claim 37 has been canceled. Claims 32 and 63-65 have been amended to be more consistent with the specification and original claims. These amendments are the same ones made in the Amendment After Final Rejection filed on May 2, 2002, but not entered by the Examiner. Support for the amendments to claims 32 and 63-65 may be found, for example, in the specification at page 4, lines 7-11. Accordingly, no new matter has been added.

II. REJECTIONS UNDER 35 U.S.C. § 112

In the final Office Action dated January 8, 2002, the Examiner maintained his rejection of claims 35 and 37, and further rejected new claims 67 and 69 as being indefinite under 35 U.S.C. § 112, second paragraph, for the reasons of record. *See* final Office Action, p. 2, paragraph 2. Applicants thank the Examiner for indicating in the Advisory Action dated May 22, 2002, at page 2, that the rejections under 35 U.S.C. § 112 had been overcome by Applicants' arguments presented in the Amendment After Final Rejection filed on May 2, 2002.

III. REJECTION UNDER 35 U.S.C. §103(a)

In the Final Office Action, the Examiner rejected claims 32-69 under 35 U.S.C. §103(a) over WO 97/19998 (Aaslyng) in view of U.S. Patent No. 5,769,903 (Audousset). The Examiner maintained the rejection in the Advisory Action. Applicants traverse the rejection for the reasons already of record as well as those presented below.

To establish a *prima facie* case of obviousness, three basic criteria must be met. The prior art references must teach or suggest all the claim elements. There must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one

of ordinary skill in the art, to modify or combine reference teachings. Finally, there must be a reasonable expectation of success in making the proposed modification or combination. M.P.E.P. § 2143 (8th ed. 2001). Additionally, the evidence of a teaching, suggestion, or motivation to combine must be "clear and particular." *In re Dembiczak*, 175 F.3d 994, 999 (Fed. Cir. 1999). As the Federal Circuit has stated, the Examiner must demonstrate a teaching or motivation to combine the prior art references to overcome the "powerful attraction of a hindsight-based obviousness analysis." *Id.*

A. The Examiner Has Shown No Motivation To Combine Aaslyng with Audousset

In the present case, the Examiner has failed to show any suggestion or motivation to combine Aaslyng with Audousset with a reasonable expectation of success. As a result, no *prima facie* case of obviousness has been made.

1. The Motivation Asserted by the Examiner is Not Supported by Evidence of Record and is Incorrect

The presently claimed invention is drawn to a composition for the oxidation dyeing of keratin fibers, comprising at least one oxidation dye chosen from heterocyclic oxidation bases and heterocyclic couplers and at least one laccase-type enzyme, provided that the oxidation bases are not chosen from 4,5-diamino-6-hydroxy- pyrimidine and 3,4-diaminohydroxy-pyrazole, and the couplers are not chosen from indole, indoline, monocyclic pyridine, and phenazine compounds.

The Examiner cites Aaslyng for its teaching of a hair dyeing composition comprising laccase enzymes, aromatic dye precursors and couplers. *See* Office Action dated August 15, 2001, at 3; *see also* Final Office Action dated January 8, 2002, at 3. The Examiner admits that Aaslyng does not teach heterocyclic bases and heterocyclic couplers as claimed. *Id.* He cites

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Audousset's teaching of both aromatic and heterocyclic dye precursors, and then argues that "in view of the teaching of the secondary reference of Audousset one having ordinary skill in the art would be motivated to modify [the] primary reference of Aaslyng by substituting other dyes [*i.e.*, presumably the Examiner means non-heterocyclic bases and couplers] with heterocyclic bases and couplers in dying compositions as described above to modify different color and shades in the dyeing of hair." *Id.* at 4. Despite this assertion, the Examiner has failed to point to a teaching or suggestion in either reference to support his conclusion, thereby rendering it improper, particularly in view of recent case law. *See In re Lee*, 277 F.3d 1338 (Fed. Cir. 2002).

Aaslyng teaches a permanent dyeing composition for keratinous fibers containing an oxidation enzyme comprising one or more oxidation enzymes derived from a strain of the genus *Scytalidium*, one or more dye precursors, and optionally one or more modifiers. *See* page 3, lines 21-27. The oxidation enzyme is a laccase. *See* page 4, lines 30-31. The oxidation dye precursor (also known as a "primary intermediate" or an "oxidation base") "is converted into a colored compound (*i.e.*, a dye) by the oxidation agent." *See* page 6, lines 13-18. The oxidation dye precursor may be an aromatic compound belonging to diamines, aminophenols, and phenols. *See* page 6, lines 19-22. As the Examiner is aware, diamines, aminophenols, and phenols are not heterocyclic oxidation dye precursors. Aaslyng does disclose 2,6-diaminopyridine and phenazines, which are heterocyclic, as oxidation dye precursors. *See* page 6, line 27 – page 7, line 22. However, this is not the nomenclature typically used in the art for these compounds. 2,6-diaminopyridine, for instance, is classified as a coupler by Zviak, a book known to and used by those of ordinary skill in the hair dyeing art. *The Science of Hair Care*, Charles Zviak, ed., Marcel Dekker, Inc. New York (1986) p. 266. 2,6-diaminopyridine and phenazines are classified as couplers in the present application and specifically excluded as such from Applicants' claimed

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invention in the proviso at the end of, *e.g.*, claim 32. Because the law requires that claims be read in light of the specification, it is clear that Applicants intended there to be neither 2,6-diaminopyridine nor phenazine, classified herein as couplers, in the presently claimed composition.

Therefore, as admitted by the Examiner and regardless of what Aaslyng calls these compounds, Aaslyng does not teach or suggest an oxidation dyeing composition containing at least one oxidation dye chosen from heterocyclic oxidation bases, heterocyclic couplers, and acid addition salts thereof, with the proviso that the composition does not comprise a heterocyclic oxidation base chosen from 4,5-diamino-6-hydroxy-pyrimidine and 3,4-diaminohydroxyl-pyrazole, and does not comprise a heterocyclic coupler chosen from indole, indoline, monocyclic pyridine, and phenazine compounds, as presently claimed.

As stated above, the Examiner relies on Audousset to overcome the deficiencies of Aaslyng. Audousset teaches a composition comprising at least one oxidation base, at least one indole coupler, and at least one additional heterocyclic coupler which is different from the indole coupler. *See* col. 2, lines 2-5. The oxidation base may be chosen from heterocyclic bases. *See* col. 4, lines 39-43. Based on these broad teachings of Audousset, the Examiner takes the position that it would have been obvious to substitute the heterocyclic bases and couplers of Audousset for the non-heterocyclic bases and couplers of Aaslyng. Applicant respectfully submits that the Examiner has failed to provide the requisite motivation for the proposed substitution.

Applicants respectfully submit that the substitution of Aaslyng's oxidation dye precursor with a heterocyclic base disclosed in Audousset would not necessarily result in the presently claimed composition, and that there is certainly no motivation in either reference that would have

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guided one of ordinary skill to make this substitution. It is known that an initial color is obtained from reaction of an oxidation dye precursor with an oxidizing agent. *See* Aaslyng, page 6, lines 13-16, and Audousset, col. 1, lines 23-27. It is also known that this initial color may be modified by using couplers. *See* Audousset, col. 1, lines 28-30. As will be explained in more detail below, the mere substitution of one oxidation dye precursor for another, such as Aaslyng's oxidation dye precursor with Audousset's heterocyclic dye precursor, would not have provided the requisite motivation needed to support a *prima facie* case of obviousness.

2. It is Known to Use Oxidation Dye Precursors in Dye Compositions

Although it is well known that oxidation dye precursor(s) form dyes, this knowledge would not in itself have motivated one of ordinary skill in the art to (1) select a heterocyclic oxidation dye precursor as taught in Audousset and (2) then use it as a substitute for an aromatic oxidation dye precursor taught in Aaslyng. Although the list of approved oxidation dye precursors which are safe and useful for dyeing hair is generally known to one of ordinary skill in the art (*see, e.g.,* G. Wis-Surel, "Some Challenges in Modern Hair Colour Formulations," *International Journal of Cosmetic Science*, 21 (1999), p. 329-330), there is no reason why this knowledge of known, useful oxidation dye precursors would have motivated one of ordinary skill in the art to make the proposed substitution.

Specifically, because many oxidation dye precursors are already known, and because it takes time to determine which are safe for use, an invention in the oxidation dye art may often involve, instead of brand new dye components, combinations of known oxidation dye precursors and couplers to achieve a certain color or whatever properties the inventor is trying to obtain. Practically speaking, to be useful, an oxidation hair dye must meet certain requirements, such as, *inter alia*, resistance of the coloration to external factors such as light, washing, permanent

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waving, perspiration, or rubbing. *See* specification at p.2; *see generally, e.g.*, J. Corbett, "An Historical Review of the Use of Dye Precursors in the Formulation of Commercial Oxidation Hair Dyes," *Dyes and Pigments*, vol. 41 (1999), p. 135. Further, an oxidation dye precursor may be selected for the initial color or may be selected based upon improved stability, rheological properties, diffusion of the dye into the hair, rinseability, inclusion of effective conditioning agents, viscosity, or rapid dyeing effect. *See, e.g.*, U.S. Patent No. 5,393,305 to Cohen at col. 1, lines 34-60. Thus, because the formulation of an oxidation dye requires consideration of so many different criteria, one of ordinary skill in the art would need more than the general guidance of Aaslyng or Audousset, *i.e.*, an oxidation dye precursor is converted to a colored compound, to be motivated to (1) select a heterocyclic oxidation dye precursor as taught in Audousset, and (2) use that dye precursor as a substitute for the oxidation dye precursors taught in Aaslyng.

Moreover, there is no "clear and particular" disclosure in any of the references that would teach, suggest, or provide motivation to one of ordinary skill in the art to make the proposed substitution to achieve the claimed invention. Further, there is no "clear and particular" teaching or suggestion that would motivate one of ordinary skill in the art to make the proposed substitution with a reasonable expectation of success in achieving the claimed composition.

With regard to Aaslyng, one of ordinary skill in the art reading the reference would believe that the disclosed aromatic oxidation dye precursors would be sufficient for use in an oxidative dye composition. One skilled in the art is not given any evidence suggesting that any aromatic oxidation dye precursor disclosed in Aaslyng is somehow defective and needs to be substituted with a specific class of oxidation dye precursors, namely heterocyclic oxidation dye precursors, and thus there is not the slightest suggestion to replace Aaslyng's oxidation dye

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precursor with a specific class of oxidation dye precursor disclosed in Audousset. *See Winner Int'l Royalty Corp. v. Wang*, 202 F.3d 1340, 1349, 53 U.S.P.Q.2d 1580 (Fed. Cir. 2000) (where the Federal Circuit found no motivation to combine references when there was not an apparent disadvantage to using the method disclosed in one of the prior art references.)

Although the Examiner has stated that the proposed substitution would have been obvious "to modify different color and shades in the dyeing of hair," the Examiner has failed to point to a "clear and particular" teaching in any of the references that would motivate one of ordinary skill in the art to make the substitution proposed by the Examiner with any reasonable expectation of success. Only Applicants' disclosure has provided the basis of knowledge for making the claimed composition with any reasonable expectation of success, and such hindsight, as the Examiner knows, is improper.

For at least these reasons, the Examiner's asserted motivation is insufficient to support a *prima facie* case of obviousness and is incorrect.

3. The Broad Teaching of a Coupler Does not Provide the Requisite Motivation to Make the Proposed Substitution

The Examiner asserts that one of ordinary skill in the art would select a heterocyclic coupler from Audousset and use it as a substitute for Aaslyng's coupler because it would modify different colors and shades. Although it is true that color may be modified by adding a coupler to an oxidation dye precursor and oxidizing agent, varying shades of color can be achieved by the selection of certain other variables that are part of the process of oxidation dyeing. Thus, while it is true that couplers may be used to modify the shade or color of an oxidation dye composition comprising an oxidation dye precursor, couplers are not the only means for modifying the shade or color of an oxidation dye composition.

As an initial matter, when discussing color, it is important to clarify whether the color at issue is the color of the oxidation dye composition in solution (how it looks in the bottle) or the color of the dyed hair because the physical properties of hair affect the resultant color of a dye on the hair. This is why people with different hair types and different original hair color will obtain varying results in terms of dyed hair color even when using the same oxidation dye composition.

Several other variables also affect the color (both in solution and in the hair), including the number of oxidation dye precursors and couplers used, the types of oxidation dye precursors and couplers used, the pH of the aqueous solution, and the make-up of the hair fiber itself. As discussed in detail below, a change in any of these factors would necessarily modify the shade or glint of the aqueous dye solution or of the dyed hair. As stated by one skilled artisan:

The final colour produced is a function of the amounts and nature of the individual primary intermediates [i.e., oxidation bases] and couplers in the composition and the pH at which the process is performed. . . . While the chemical reaction involved in colour formulation from a mixture of primary intermediates and couplers in solution are well understood, the stage has not been reached where this knowledge can be used to formulate shades in the absolute sense.

J. Corbett, "Hair Colorants: Chemistry and Toxicology," *Cosmetic Science Monographs*, Number 2, Micelle Press, Weymouth, Dorset, England, (1998) pp. 21.

(a) Background: The Oxidation Dyeing Process

Oxidation dyeing is a chemical reaction wherein a colorless compound called an oxidation dye precursor is oxidized to a reactive intermediate compound. The process is complicated, but the gist is that, via oxidation condensation/polymerization, the reactive intermediate reacts, either with itself or with a coupler compound, to form a colored dye inside the hair fiber *See The Science of Hair Care*, Charles Zviak, ed., Marcel Dekker, Inc. New York (1986) pp. 268-269. ; *See also* S. Pohl, Ph.D., "The Chemistry of Hair Dyes," *Cosmetics &*

Toiletries, vol. 103, (1988) p. 62. The role of the hair itself in the dyeing process is discussed further below.

(b) Choice of Oxidation Dye Precursor(s) and Coupler(s)

The color of the oxidation dyeing solution (*i.e.*, the color in the “bottle,” not on the hair) can often be predicted based upon the use of certain combinations of one known oxidation dye precursor and one known coupler. This is because the reaction schemes of various combinations of a single oxidation dye precursor and a single coupler are known. *See, e.g.*, Zviak at pp 280-284. For example, the reaction scheme of p-phenylenediamine with a separate coupler is known. *See, e.g.*, K. Brown, “Hair Colorants,” *J. Soc. Cosmet. Chem.*, vol. 33, (1982), p. 377. However, once the equation is changed, and other ingredients are added to the one known oxidation base and the one known coupler, then it is harder to predict the color in solution. “[A]ny varying element can cause a major change.” Zviak at p. 272.

(c) Variations in pH

As mentioned above, pH may effect the color of the oxidation dye composition in solution or in the hair. As stated by G. Wis-Surel:

There are also other composition aspects that impact colour performance of the final product. For example, pH of the colouring mixture has a pronounced effect on the final colour developed in hair. ...Reaction rate of colour formation is affected by pH of the medium whereby the colour intensity and, in some cases, colour hue is changed. ... The same shade can be produced by several different dye compositions, but one dye composition can also produce different shades depending on pH and other parameters of the delivery vehicle.

G. Wis-Surel at pp. 327 and 330. For example, the effect of pH on color formation in hair using one oxidation dye precursor and one coupler is shown in the following table.

pH	resorcinol + p-phenylenediamine	pH	p-aminophenol
6.6	dark brown	5.9	warm red brown
8.5	med. slightly redder brown	8.6	light warm red brown
10	med. slightly yellow greenish brown	9.9	light yellow blond

Id. at 332. As can be seen from the data in the table, adjusting the pH from alkaline to neutral to acidic can provide a wide range of colors even using the same oxidation dye composition. *See also* J. Corbett, "Chemistry of Hair Colorant Processes - Science as an aid to Formulation and Development," *J. Soc. Cosmet. Chem.*, 35, (1984) pp. 297-310. Accordingly, even knowledge of the colors expected from known oxidation dye precursor and coupler combinations is not enough to allow one of ordinary skill in the art to predict the color of a combination where pH varies.

(d) Physical Properties of the Hair Itself

As noted above, due to the physical properties of hair, including the fact that there are a variety of hair types and colors, it is difficult to predict hair color after an oxidation dye composition has been used. Pohl describes the problems associated with oxidation dyeing of human hair:

[T]he outer part of the human hair or cuticle, is made up of a number of layers of interlocking scales. If it is desired that the color not rub off the hair or be easily rinsed from the hair, then the molecules of dye must penetrate the cuticle and be adsorbed in the cortex....[H]uman hair must be dyed near room temperature, with a relatively short application time. Therefore, in order to penetrate the cuticle of human hair, molecules need to diffuse very readily. This means that the molecules that comprise hair dyes must be small ones. However, in order to be intensely colored enough to be usable as a dye, a molecule needs a considerable amount of conjugation. Therefore, in order to be a dye, a molecule must be relatively large.

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Pohl, at p. 58. However, because the dye molecules are large, a major percentage of the dye is formed outside of the hair fiber and gets washed out of the hair during the rinsing process. A minor percentage of the dye is formed inside the hair and because the dye molecules are large, the dye does not easily diffuse out of the hair, thereby creating a permanent dye. *Id.* at 62

A further complication in predicting the color of dyed hair is that different hair types have different rates of diffusion. As stated by J. Corbett in "Chemistry of Hair Colorant Processes - Science as an aid to Formulation and Development" at p. 299:

A further complication in predicting the outcome of competing reactions inside the hair fiber is that it will depend not only on the relative reactivity of the competing couplers, but also on their relative rates of diffusion from the dye bath into the hair. Furthermore, for competing reactions taking place inside a swollen keratin fiber, we do not know to what extent the rate of the coupling reactions will be diffusion controlled.

Pohl further supports Applicants' position with his conclusion that:

Since a number of competing chemical reactions are going on simultaneously to effect the final color result, it may be imagined that making natural-appearing shades of oxidation dyes products is very complicated. The actual chemistry is even further complicated: the hair plays a part in the final result, in that the diffusion of the intermediates into the [h]air, both before and after any chemical reactions have occurred, plays an important part of the process, and one cannot predict the final color result from a knowledge of the solution chemistry of the dyes.

Pohl, at p. 64 (emphasis added).

Thus, as stated by those skilled in and familiar with the art, namely, the authors of the various technical articles cited above, the hair dye art is far from predictable. Further, there is no guidance in either reference, based on all the many factors that must be considered in preparing a hair dye, to substitute Audousset's disclosed heterocyclic bases and couplers for Aaslyng's oxidation dye precursor with the expectation of achieving the resistant, unselective dye

composition presently claimed. As the Examiner knows, obviousness requires at least some degree of predictability (*see* M.P.E.P. § 2143.02 (8th ed. 2001)), and here it is not possible to predict the color or the resultant properties of the dye composition.

B. The Examiner Improperly Relied on *In re Kerkhoven*

Finally, the Examiner argued that “[i]t is *prima facie* obvious to combine two compositions each taught by the prior art to be useful for the same purpose, in order to form a third composition which is to be used for the very same purpose” (Office Action dated January 8, 2002, at 3, and the Advisory Action dated May 22, 2002, at 2.) (citing *In re Kerkhoven*, 205 USPQ 1069 (CCPA 1980). Even though Applicants are unsure which two “compositions” the Examiner had in mind, Applicants submits that reliance on *Kerkhoven* to establish a *prima facie* case of obviousness here is improper, because the holding and reasoning of *Kerkhoven* do not apply to this case. In *Kerkhoven*, the applicant claimed a process for preparing a detergent composition comprising mixing two known detergent materials. The court reasoned that “the idea of combining [the two detergent materials] flows logically from their having been individually taught [each for the very same purpose, *i.e.*, as detergents] in the prior art.” 205 U.S.P.Q. 1069, 1072. Based on this reasoning, the court held that the claims at issue requiring “*no more than the mixing together*” of two conventional detergents to make a third detergent composition set forth “*prima facie* obvious subject matter.” *Id.* (emphasis added).

The present invention, however, does not fall within the facts of *Kerkhoven* for several reasons. First, the present invention does not involve merely mixing two dyeing compositions. The presently claimed composition is a combination of two ingredients, and not two compositions, as discussed by *Kerkhoven*. Further, although they are used for the same overall purpose of dyeing hair, an oxidation dye precursor and a coupler actually have different roles, in

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that the oxidation dye precursor is indeed the required "base" for an oxidation dye color whereas the coupler is only a color modifier, and cannot generally be used on its own as a dye like the dye precursor can. Thus, the oxidation dye precursors and couplers are not separate compositions as *Kerkhoven* uses the term, but instead components of a single composition, each with its own role in the composition.

Further, the combination of the two compositions of Aaslyng and Audousset would not result in the claimed invention. In particular, Aaslyng is directed to a composition comprising an oxidative enzyme, comprising one or more dye precursors, and optionally one or more modifiers. *See* page 3, lines 21-27. Audousset is directed to a composition comprising at least one oxidation base, at least one suitably selected indole coupler, and at least one additional heterocyclic coupler different from the indole coupler. *See* col. 2, lines 1-6. So, the combination of the two compositions would result in a combined composition comprising an oxidative enzyme, at least one oxidation base, at least one indole coupler, and at least one heterocyclic coupler different from the indole coupler. This does not result in the claimed invention because, for one thing, the claimed invention specifically excludes indole couplers from its composition. For this reason, combining the two compositions, as required by the facts of *Kerkhoven*, would not, contrary to the Examiner's assertion, result in the claimed invention.

Second, as discussed at length above, the Examiner in the present case is picking and choosing ingredients, such as Aaslyng's oxidation enzyme, and Audousset's heterocyclic oxidation bases and couplers, from different parts of each reference, and from long lists of possible compounds, in an attempt to obtain the presently claimed invention. One of ordinary skill in the art, unless relying on hindsight, would not have had any reason or guidance to make

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these very specific selections. This picking and choosing hardly qualifies as “mere mixing,” as required by the facts of *Kerkhoven*.

Third, while *Kerkhoven* involved the mere mixture of two detergent compositions, the oxidation dye composition of the present invention involves an oxidation reaction, as discussed at length above; again, hardly a “mere mixture.” See, e.g., *Zviak* at pp. 263-286.

C. The Examiner Improperly Relied on *In re Susi*

The Examiner also stated that “combination for same purpose, of one additive explicitly disclosed in prior art and another suggested by prior art is at least prima facie obvious” and relied on *In re Susi*, 169 U.S.P.Q. 423 (C.C.P.A. 1971). In that case, *Susi*’s claims were directed to processes for stabilizing polymers against ultraviolet light. The prior art was also directed to processes for stabilizing polymers against ultraviolet light. In fact, *Susi* was attempting to claim a smaller class of known compounds. The Examiner’s reliance on this case is improper because in the instant application the ingredients, an oxidation dye precursor and a coupler, do not have the same purpose. As discussed above, an aromatic oxidation dye precursor and a heterocyclic oxidation dye precursor are chosen for different purposes because one of ordinary skill in the art would know that each would provide a different initial color and different resultant properties to an oxidative dye composition. Moreover, an aromatic oxidation dye precursor and a coupler are chosen for different purposes. An aromatic oxidation dye precursor provides an initial color to an oxidative dye composition which color may be modified by a coupler. So, based upon this understanding of the ingredients of an oxidative dye composition, the combination of them, or the substitution of one for the other, is not proper because they do not have the same purpose in an oxidative dye composition.

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**D. Because A Prima Facie Case of Obviousness Has Not Been Established,
Applicants do Not Need to Provide Data of Unexpected Results**

The Examiner states that "the applicants do not provide any data to show that dyeing composition free of heterocyclic coupler chosen from indole, indoline, monocyclic pyridine and phenazine compounds and free of heterocyclic bases chosen from 4,5-diamino-6-hydroxypyrimidine and 3,4-diaminohydroxypyrazole would [obtain] unexpected results." See Advisory Action dated May 22, 2002, at 2. However, for all of the reasons presented above, as well as those already of record, Applicants have established that a *prima facie* case of obviousness has not been made by the Examiner. Therefore, it is not necessary for Applicants to present evidence of unexpected results in an effort to rebut the *prima facie* case.

For at least the foregoing reasons, the Examiner has failed to establish a *prima facie* case of obviousness. Applicants request reconsideration and withdrawal of the rejection.

III. CONCLUSION

In view of the foregoing amendments and remarks, Applicants respectfully request the reconsideration of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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APPENDIX TO AMENDMENT OF OCTOBER 10, 2002

Version of amended claims with markings to show changes made, pursuant to 37 C.F.R.

1.121(c)(1)(ii). Claim 37 was cancelled. Claims 32 and 63-65 were amended, as follows:

32. (Amended) A composition for the oxidation dyeing of keratin fibers, comprising:

- (a) at least one oxidation dye chosen from heterocyclic oxidation bases, heterocyclic couplers, and acid addition salts of said oxidation dyes; and
- (b) at least one laccase-type enzyme,
provided that said composition does not comprise a heterocyclic oxidation base [is not] chosen from 4,5-diamino-6-hydroxy-pyrimidine and 3,4-diaminohydroxy-pyrazole, and

provided that said composition does not comprise a heterocyclic coupler [is not] chosen from indole, indoline, monocyclic pyridine, and phenazine compounds.

63. (Amended) A method of dyeing keratinous fibers, comprising the step of applying at least one dyeing composition to said keratinous fibers for a sufficient time to achieve a desired coloration, wherein said at least one dyeing composition comprises:

- (a) at least one oxidation base chosen from heterocyclic oxidation bases, heterocyclic couplers, and acid addition salts of said oxidation dyes, provided that said dyeing composition does not comprise a heterocyclic oxidation base [is not] chosen from 4,5-diamino-6-hydroxy- pyrimidine and 3,4-diaminohydroxypyrazole; and provided that said dyeing composition does not comprise a heterocyclic coupler [is not] chosen from indole, indoline, monocyclic pyridine, and phenazine compounds; and

- (b) at least one enzyme of the laccase type.

64. (Amended) A method for dyeing keratinous fibers comprising the steps of:

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- (a) storing a first composition;
- (b) storing a second composition separately from said first composition;
- (c) mixing said first composition with said second composition to form a mixture; and
- (d) applying said mixture to said keratinous fibers for a sufficient time to achieve a desired coloration;

wherein said first composition comprises at least one oxidation base chosen from heterocyclic oxidation bases, heterocyclic couplers, and acid addition salts of said oxidation dyes, in a medium appropriate for dyeing keratinous fibers, provided that said first composition does not comprises a heterocyclic oxidation base [is not] chosen from 4,5-diamino-6-hydroxypyrimidine and 3,4-diaminohydroxypyrazole; and provided that said first composition does not comprise a heterocyclic coupler [is not] chosen from indole, indoline, monocyclic pyridine, and phenazine compounds; and

wherein said second composition comprises at least one enzyme of the laccase type, in a medium appropriate for dyeing keratinous fibers.

65. (Amended) A multicompartment device or a dyeing kit, comprising:

a first compartment containing a first composition comprising at least one oxidation base chosen from heterocyclic oxidation bases, heterocyclic couplers, and acid addition salts of said oxidation dyes, provided that said composition does not comprise a heterocyclic oxidation base [is not] chosen from 4,5-diamino-6-hydroxypyrimidine and 3,4-diaminohydroxypyrazole; and provided that said composition does not comprise a heterocyclic coupler [is not] chosen from indole, indoline, monocyclic pyridine, and phenazine compounds, in a medium appropriate for dyeing keratinous fibers; and

a second compartment containing a second composition comprising at least one enzyme of the laccase type, in a medium appropriate for dyeing keratinous fibers.

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